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TECHSPEC® 1.0 OD



Please select your shipping country to view the most accurate inventory information, and to determine the correct Edmund Optics sales office for your order.

Select Your Country/Region: European Union

Submit

1

€37⁹⁵

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Volume Pricing

Qty	€37,95
1+	each

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Prices shown are exclusive of VAT/local taxes

Product Downloads

- STEP:step
- PDF Drawing:pdf
- IGES:igs
- eDrawing:eprt
- EO Spec Sheet
- [Download All](#)

General

Type: Neutral Density Filter

Note: Optical density values are average over specified blocking wavelength range.

Physical & Mechanical Properties

Diameter (mm): 12.50

Thickness (mm): 1.60 Nominal

Dimensional Tolerance (mm): ±0.5

Clear Aperture (%): 80

Optical Properties

Angle of Incidence (°): 0

Optical Density OD (Average): 1.0

Substrate: Float Glass

Coating: Surface 1: Inconel

Reflection (%): 45.00

Surface Quality: 80-50

Transmission (%): 10.00

Blocking Wavelength Range (nm): 400 - 700

Neutrality: ±5% of Optical Density

Surface Flatness (P-V): 4 - 6λ

Regulatory Compliance

RoHS 2015: **Compliant**

Certificate of Conformance: [View](#)

Reach 247: **Compliant**

Need different specs or modifications?

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings
- High-precision surface quality and finishes
- Tight tolerances and complex geometries
- Scalable production—from prototyping to full-scale production

Learn more about our [custom manufacturing](#) services.

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Product Details

- Spectrally Flat
- Maximum Accuracy and Neutrality at Moderate Price
- Use Stacks to Create Intermediate Density Values

Reflective Neutral Density (ND) Filters have constant density values across the surface. The transmission-to-reflection ratio varies with density selection, whose relationship can be explained by the equation: $T(\text{Percent Transmission}) = 10^{-OD} \times 100\%$. Optical Density exhibits an additive relationship; for example, stacking filters with OD values of 0.6 and 0.9 yields a resultant density of 1.5. In stacks, the total density is the sum of each filter's density. Reflective Neutral Density (ND) Filters are used primarily for attenuating light over a wide spectral range. They are often used in laser and photometer applications, where excessive power can cause damage or inaccurate results. For best results, orient the mirrored side toward the source at a 0° angle of incidence.

Note: Low optical density filters (0.1, 0.15, and 0.2 OD) are coated with thin layers of Inconel and their performance may shift overtime. To prolong the lifetime of these filters, we recommend using non-contact cleaning methods (such as compressed air) and avoiding the use of these filters in humid environments to prevent oxidation. Using contact cleaning methods such as solvents will damage the coating and the product will no longer meet the advertised specifications.

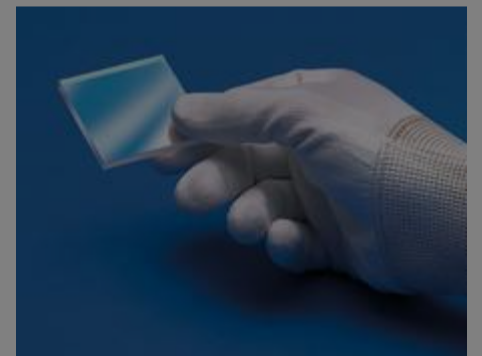
Note: Due to supply chain issues, our kits may be delivered with an alternative packaging solution in place of a wooden box. For any questions, please contact kits@edmundoptics.com.

Reflective Neutral Density Filter Kits

Reflective Neutral Density Filter Kits are available with either 8 or 14 optical densities. The kits with 8 filters include our most popular filters, with densities of 0.3, 0.5, 1.0, 1.3, 1.5, 2.0, 2.5, and 3.0. The kits with 14 filters include all available densities, except for 3.0. Kits are ideal for determining precise system optical density requirements. Custom densities are available for OEM applications.

Special Handling

These optics require special handling to avoid damage and ensure long-term performance. Proper handling, cleaning, and storage are essential to maintain optical quality. Explore our [Optics Cleaning Resources](#) for step-by-step guides and best practices. For personalized assistance, [Email us](#) or [Chat](#) with our technical support team.



Component Handling Tools

Accessories

Note: Compatible accessories for individual stock numbers may vary. If unsure about which accessories work with your products, please contact us [here](#).

	Title	Compare	Stock Number	Price	Buy
MORE+	12.5mm Diameter, Reflective ND Filter Kit (14 Filters)		#64-348 CLEARANCE	€294,95 Request Quote	7 In Stock <input type="text" value="1"/>
MORE+	50mm Square, Reflective ND Filter Kit (14 Filters)		#64-350 CLEARANCE	€585,95 Request Quote	1 In Stock <input type="text" value="1"/>
MORE+	25mm Diameter, Reflective ND Filter Kit (8 Filters)		#54-460 CLEARANCE	€333,95 Request Quote	2 In Stock <input type="text" value="1"/>

Frequently Purchased Together



#30-263 - 12mm Max. Aperture, Iris Diaphragm
€44,00



#

€55,95



€55,95







#03-655 - Sliding 2" x 3" Base Plate
€25,25

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Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
	12.5/12.7mm Optic Dia., SM05 Thin Mount, M4	Fixed		#13-789	€19,50 Request Quote	10 In Stock <input type="text" value="1"/>
	12.5/12.7mm Optic Dia., SM05 Thin Mount, 8-32	Fixed		#13-790	€19,50 Request Quote	17 In Stock <input type="text" value="1"/>
	12.5/12.7mm Optic Dia., L-Slot Direct Mount	Fixed		#36-416	€59,00 Request Quote	17 In Stock <input type="text" value="1"/>
	12.5/12.7mm Optic Dia., Side Flange Direct Mount	Fixed		#36-418	€59,00 Request Quote	10 In Stock <input type="text" value="1"/>
	12.5/12.7mm Optic Dia., L-Slot and Rotation Direct Mount	Adjustable - Rotary		#36-417	€96,50 Request Quote	20+ In Stock <input type="text" value="1"/>
	5.0 - 25.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-529	€102,00 Request Quote	20+ In Stock <input type="text" value="1"/>
	7.0 - 40.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-676	€106,00 Request Quote	20+ In Stock <input type="text" value="1"/>
	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	€108,00 Request Quote	CONTACT US <input type="text" value="1"/>
	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	€116,00 Request Quote	20+ In Stock <input type="text" value="1"/>
	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	€120,00 Request Quote	20+ In Stock <input type="text" value="1"/>
	4.0 - 36.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-077	€157,00 Request Quote	5 In Stock <input type="text" value="1"/>
	12.5/12.7mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-955	€261,00 Request Quote	5 In Stock <input type="text" value="1"/>
	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	€410,00 Request Quote	CONTACT US <input type="text" value="1"/>

	Title	Type	Compare	Stock Number	Price	Buy
MORE+	 12.5/12.7mm Optic Dia., Precision Gimbal Mount	Adjustable			€421,00	7 In Stock <input type="text" value="1"/> 
MORE+	 12.5/12.7mm Optic Dia., X-Y-Z Translating Mount					5 In Stock <input type="text" value="1"/> 

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Check out our full selection of mounts [here](#).


Resources

Media Type


- Application Note
- FAQ
- Glossary
- Video

 APPLICATION NOTE


Understanding Neutral Density Filters

 FAQ


What is an ND Filter?

 FAQ

Can I place ND filters back-to-back and increase...

 FAQ

What is the difference between using an absorptiv...

 FAQ

How should I orient my reflective ND or interferenc...

 GLOSSARY

Continuously Variable Apodizing Filter

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